

more than equal to my most sanguine expectations. During these last 22 years, twenty cases have fallen into my hands, and complete success has crowned my efforts in all of them, with the exception of one case, where the intestine adhered to the sac, and where the complete return of the protruded parts was impossible.

"The method pursued by me is very simple. The patient is placed on his back, his knees elevated so as to relax the muscles as much as possible, the tumour is grasped at its greatest diameter by the right hand, whilst with the left the neck of the tumour is firmly supported and compressed. This last part of the operation, performed by the left hand, I deem of the utmost importance; it prevents the tumour from spreading out in a lateral direction, and consequently prevents it from doubling up over the external ring. The compression then is to be kept up by the right hand in a steady and gradually increasing manner, and not performed by jerks. If the strangulation have existed for several hours, the operation will seldom succeed in a shorter space of time than fifteen minutes, and in large herniæ a much longer space is often required; I have in such cases continued the compression from *one to two hours*. The difficulty of replacing the parts when the tumour is very large, appears to arise from the difficulty of grasping the tumour, and consequently the additional assistance of one or both hands of another person becomes necessary."

Mr. McLeod does not believe that there exists any thing entitled to the name of *stricture* in strangulated hernia, but that the cause alone why the protruded parts cannot be replaced, is the extreme distention by their contents, wind, &c. in the first instance, and enlargement in the second by fulness of vessels.

42. *On the Acupuncture of Arteries in the Treatment of Aneurism.*—M. VELPEAU communicated to the Academy of Medicine of Paris, at the meeting of the 28th of December last, an exceedingly interesting memoir on this subject. We find notices of this memoir in several of the French journals, but the fullest and most satisfactory we have met with is the following from the *London Medical Gazette*.

The greater number of important discoveries in the arts and sciences have been owing rather to chance than inference, or at least it is in conducting investigations for some other purpose, that discoverers have arrived at the ends they have attained.

In April, 1822, M. Velpeau wished to repeat before his pupils some experiments on acupuncture, which he had seen performed at Tours, by M. Bretonneau, in 1818:—A dog of middle stature was brought to the amphitheatre with the intention of passing long needles through the heart, the large arteries, and principal viscera: one of these was left in the thigh for twenty-four hours, the artery being transfixed. The animal escaped, and the experimentalist supposed that he would necessarily perish; but two of the pupils, who had found the dog, brought him back four days after perfectly well. The needle which had been placed there being no longer to be found in the limb, M. Velpeau laid bare the artery to ascertain whether the artery had really been transfixed, and if the puncture had left any trace. As the vessel was partially torn, M. Velpeau first inquired why there had been no hæmorrhage; he soon saw that a very firm concretion of fibrine filled it up entirely for the space of an inch. Nevertheless, he drew no inference from the fact, and he had entirely lost sight of it, when, in the month of November, 1828, an accidental circumstance recalled it to his recollection. Whilst he was separating the femoral artery from the vein in a dog, and just as he was pushing it aside with a pin, some one came in, so that he was obliged for the moment to discontinue the operation. A sudden movement of the animal forced the pin through the artery into the limb. It remained there five days, when, on taking it out, and examining the parts carefully, M. Velpeau ascertained that an obliteration of the vessel had been the result in this case as in the preceding. The fact now arrested his attention, and on reflexion he thought he could explain it thus: if it be true, thought he, that

it is sufficient to keep a ligature for an hour or two on large vessels in order to produce their obliteration, as Messrs. Travers, Hutchison, and others assert, it ought likewise to be possible to arrive at the same end by exciting at a given point of these vessels a morbid action capable of impeding the progress of the blood, and leading to its coagulation.

Always impressed with the idea that the contractions of the heart have less influence on the motion of the blood than is generally imagined, M. Velpeau was led to understand how a foreign body, even although very small, placed so as to remain transversely across a vessel, or even so as to make some projection in relief in its interior, is capable of producing the same effect as a ligature. Confirmed in these ideas by the instances of spontaneous obliteration of the large arteries quoted by authors, M. Velpeau commenced some experiments for the purpose of determining the point.

An acupuncture needle, an inch and a half in length, was introduced in the course of the artery in the thigh of a dog without previous dissection; two other needles were also placed on the opposite side. On examining these parts on the fourth day, he found the first needle on the exterior third of the artery, which, however, was not shut up more than one-half of the other two, one was altogether without the vessel, which was obliterated by a solid clot about the length of an inch, in the midst of which the second needle was situated.

These experiments, continued M. Velpeau, were renewed in the following November, and then again in February, 1830; they were repeated in the course of last April by M. Nivert, at that time the assistant in my course of operations. I also submitted them to new proofs very recently in *La Pitié*, on a dog, in which I likewise transfixed the aorta with two pins, but which died at the end of twenty-four hours of peritonitis, and the result has always been the same. To be more sure of not missing the artery, I always took the precaution, in the later trials, of exposing it. Sometimes I only used one needle, sometimes I employed two or three, according as the vessel on which I operated was of greater or less magnitude. Every time that the needle maintained its place for at least three days, a solid clot was found at the site of the puncture, and the obliteration of the canal of the vessel was the consequence. The aorta, however, when thus treated, did not undergo any change, but as the needles did not remain there more than something above twenty hours, I do not regard it as just to draw any conclusions therefrom.

It is proper to add, besides, that up to the present time, my experiments have all been made on dogs of small stature, and that the femoral artery is the largest vessel I have transfixed. It is enough to say, that before drawing conclusions, or applying these principles to the human subject, it would be necessary to renew the experiments, and to try them on larger animals—as horses, for example. A single pin or needle has appeared to be sufficient for a vessel not exceeding in size a writing quill; two or three would be necessary for vessels half as large again; and there would be nothing to prevent the application of four or five for the larger arteries. When several are inserted, it is necessary to place them at four or six lines from one another, and in a zigzag form rather than straight.

M. Velpeau next proceeded to speak of the cases in which this method might be advantageously applied. If, as however the author scarcely ventures to hope, the coagulation produced by the presence of the needle should effect a consolidation in the human subject sufficiently strong to render the vessel permanently impermeable, the results would be of immense importance. In place of incurring the risk of wounding nerves and veins, and making a considerable and minute dissection, it would only be requisite to expose one surface of the artery at the smallest possible point: nay, perhaps it might be possible to cure the most formidable aneurisms, as those of the ham or thigh, without dividing the skin, by merely transfixing the artery with a fine needle at the groin. It is suggested as possible, that even aneurisms of the external iliac, or of the aorta, might thus be cured. By fixing a thread in the needle, it might be taken out at any time when this was deemed necessary.

Arteries have been transfixed by different surgeons by means of needles, but principally with a view of giving imaginary security to ligatures: we are not aware, however, of this proceeding having been previously adopted on the same principle as that now advocated by M. Velpeau.

43. *Tracheotomy*.—The expediency of opening the trachea in those instances in which a foreign body is lodged in one of the bronchial tubes, does not appear to be as yet entirely decided by surgeons. To aid in settling this interesting question, we have been careful to lay before our readers from time to time, such cases as appeared to throw any light upon the subject. An interesting memoir has been recently read to the the Dublin Chirurgical Society, by JONAS BROWN, M. D. and which consisting principally of an analysis of cases does not admit of condensation within the limits to which we are here restricted, and we must therefore content ourselves with the conclusions he has drawn from them, and which appear to us to be legitimate inferences.

"1. That the existence of foreign bodies in one or other *bronchus* can be ascertained by the use of the stethoscope; by the seat of the pain and other uneasy sensations; and by the previous history of the case.

"2. That since the effect of such bodies in these unnatural situations, is to excite inflammation and abscess, most commonly ending, sooner or later, in death, it is incumbent on us to attempt their extraction with the least possible delay.

"3. That small round bodies move freely from the *bronchi* to the trachea, particularly when an opening has been made in the latter, and that the best mode of promoting their expulsion is by such an operation.

"4. That when sharp and angular substances have descended into either *bronchus*, they generally become fixed there, but may be extracted by forceps or other suitable instruments passed through an artificial opening in the trachea.

"5. That the sooner such an operation is undertaken, the greater will be the chances of success, as the presence of the extraneous substance must give rise to congestion and inflammation in the lungs, and to various cerebral affections, all depending on mechanical interruption to the natural course of the circulation.

"6. That although occasional recoveries have ensued subsequent to the spontaneous ejection of foreign bodies from the *bronchi*, such cases are rare; and the greater number of persons so circumstanced have died at longer or shorter intervals."

The following case is also in point.

44. *Case of Pulmonary Abscess caused by the lodgment of a Chicken Bone in one of the Bronchiæ*. By PETER GILROY, M. D.—A widow lady, æt. 40, of a robust habit and previously remarkable for strength of constitution, was seized, while eating her dinner, on the 8th of August, 1826, with a sudden and violent fit of coughing, threatening suffocation. On recovering, she told some friends who dined with her, and who were greatly alarmed for her safety, "that a chicken bone had gone wrong, and still was sticking in her chest." By this time, however, she breathed freely, and her alarm gradually went off.

The next day she felt her chest oppressed, and complained of a slight tickling cough, with inward soreness at the top of the sternum, and general uneasiness.

She sent for an intelligent apothecary, who, conceiving her illness to have arisen from exposure to cold, took some blood from the arm, and directed aperient medicine, by which treatment she was so much relieved, as to be able to go, in a day or two afterwards, some miles into the country; but the cough and other disagreeable sensations continued, though in a less degree than before. These symptoms had increased at the end of a fortnight, but were again mitigated by a second venesection, and by a repetition of the aperients.

On the 13th of September, about five weeks after the accident, I saw her for the first time, in consequence of a further increase of the symptoms. I found her in bed, with her shoulders particularly low; her countenance was anxious, with great despondency; pulse 96, full; tongue loaded and yellow;